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ABSTRACT

The term "job aids" is a phrase used to describe a genre of ready-guidance tools or prompts that assist a person in performing a job or task. The purpose of job aids is to specify what is to be done, how to do it, the order in which it is to be done, and the standards to be met in doing it. Because job aids are not instructional materials per se, they do not take the form of reference material, tutorials, explanation, or detail. They do, however, take the form of diagrams, checklists, algorithms, flip charts, or online helps. Job aids should be succinct, procedural, visual, text based, tangible, and portable. Although they are not designed for use in all situations, job aids can be appropriate and effective tools for (1) training on the job, (2) outlining a procedure that contains more than five to seven steps, (3) presenting skills rather than knowledge or attitudes, (4) serving as a training substitute or supplement, (5) providing a convenient alternative to inaccessible reference material, and (6) detailing infrequent procedures or particular applications. When developing a job aid, it is important to plan its content, watch people perform the procedure to be described, talk to the people afterwards, do the task oneself, and test the job aid once it has been developed. When used in places where they are appropriate, job aids can often eliminate the cost of an instructor while reducing the learning curve of trainees who must use new techniques. (MN)

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JOB AIDS: GIVE THE READERS WHAT THEY WANT

What is the first thing most readers do when they must read a manual to do a job? They scan the section that explains the task and write "cheat sheets." These are notes that contain only the bare-bones, step-by-step procedures for getting their particular job done. Then they put these notes in a handy place and refer to them without ever looking at the manual again. Job aids are basically formal "cheat sheets."

More and more, technical communicators, especially in computer-related fields, are asked to write legitimate, accurate "cheat sheets." This is because we often deal with readers who don't care about why or how some piece of equipment works. They are primarily concerned with what they have to do to get their job done. They are interested in performing, not learning to perform.

This presentation defines job aids and their applications, discusses their cost and performance effectiveness, presents some hints on creating them, and warns about their shortcomings.

Definition

Job aids have been around for a long time, under various names. The term job aid is a collective noun phrase to describe a genre of tools that aid performance. Their purpose is to specify what is to be done, how to do it, the order in which to do it, and/or the standards to be met.

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Perhaps we can better define job aids by stating what they are not. They are not, in the truest sense, instructional. That is, users are not supposed to learn the procedures by heart as a result of reading the job aid. Users are supposed to refer to the job aid every time they perform the procedure. They use the job aid as a reminder and as a checklist, not as a "teacher". Because job aids are not instructional, they do not take the form of reference material, tutorials, explanation or detail. They do take the form of diagrams, checklists, algorithms, flip charts, on-line helps, etc.

If job aids can take so many forms, what do they have in common? Fundamentally, job aids are succinct, procedural and usually visual. In addition, they can be text-based, tangible and portable.

Job aids are succinct; they use the barest number of words to convey only essential information. Nice-to-know, explanatory information belongs in a reference manual. Job aids refer to a specific application and limit their information to that application.

Job aids are procedural; they list step-by-step instructions; each contains one action. For example, "open the disk drive latch and insert the boot diskette" should be two steps.

Job aids are usually visual; they contain as many visual cues as possible. These can include color diagrams, cartoons, mechanical drawings, graphics, etc. The visuals are as important as, if not more important than, the words.

Job aids can be text-based. The text may or may not be in sentence form. It is rarely in paragraph form. The words and structure are clear - they use no complicated vocabulary and no complicated phrases.

Job aids can be tangible. They are appropriate to the job and physical environment in which they are to be used. They are meant to be pointed at, manipulated, gripped with greasy hands, shoved in dirty nooks and crannies or in other words, "manhandled" in a hostile environment. So they'd better be durable too.

Job aids can be portable. They are meant to be used wherever the task to be performed has to be done. That can be beside a computer terminal, up on the wall, on-line, inscribed on a metal plaque, printed on a warning label, or stuffed in a pocket or briefcase and carted about. Job aids should be easy to carry around (if necessary), easy to consult, easy to use: in a word, accessible.

The most successful example of a job aid is the instruction plate on self-serve gas pumps. Fifty million drivers became self-sufficient within five years without courses or manuals. Other everyday examples of job aids include cookbooks, laundromat instructions, telephone books and dictionaries.

Applications

Okay, now that job aids are defined, how about their application? They certainly aren't good for everything.

a)For Use on the Job

Job aids are designed for use right on the job. An example of this is the manual flight "computer" used by pilots for pre-trip and in-flight computations. Flight "computers" have instructions and formulas printed right on them. These handy tools can be used where they are needed - at home or in the plane.

b) For More than Seven Steps

Most people can remember five to seven steps. For a procedure that requires more than that, they should refer to a job aid to verify that what they are doing is correct. Mandatory job aids also ensure that safety procedures will be followed.

c)For Skills, not Knowledge or Attitude

Job aids are useful when the procedure requires skill, not knowledge or attitude. In other words, the performer is being shown how to do something and is not expected to remember the steps or change their attitude as a result. For example, at Microtel Learning Services we produce comptuer-based training on a number of delivery systems. In order to take the courses, the student must be able to use the computer system to sign on, sign off, access the information, input answers and move around in the course. This information is secondary to the information they are supposed to remember from the course. We have created a series of job aids to help them use their delivery computer system particular to their needs as a student.

d)For a Training Substitute

As with the gas pumps, job aids are used where formal training or lengthy documentation is not appropriate. What's needed is a reminder of what to do and in what order so that the doer can perform the procedure accurately with a minimum of error and frustration.

e)For a Training Supplement

Conversely, job aids can be an inexpensive way to ensure that training carries over into the workplace. This application occurs when procedures that are lengthy (more than seven steps), critical or site-specific. Job aids used in the training process provide a structure (a starting place) on which to "pin" reference information. In this way, job aids can act as a check list.

f)For Inaccessible Reference Material

Big manuals and sets of information are cumbersome to use on an ad hoc basis. They're heavy and bulky. It can be awkward to find information in them quickly. Job aids are meant to be easily carried around and set up at the job site for ready reference.

g)For Accuracy

When order of execution and accuracy are critical, job aids provide an essential cross-check. For example, the U.S. Navy issues checklists on routine maintenance procedures. Even though those sailors may "know" the routine, they are required to systematically follow the checklist that has been developed for every maintenance procedure (no matter how simple).

h)For Infrequent Procedures

Job aids are useful when the procedure is performed occasionally (less than once a week), where the performer can't be expected to memorize the process. In this case, the job aid serves as a memory job, a reminder.

i)For Particular Applications

Certain applications are customized for a particular site. In these instances, the procedures may vary slightly from the generic. A job aid to detail the particular local procedures for each job site is helpful. For example, how many versions of DOS do you use? Each one of them applies the commands a little differently. I have made my own "job aid" to carry out the few commands I have to use in my current version of DOS.

Cost and Performance Effectiveness

Since job aids can be used instead of formal training for simple, straightforward procedures, they can eliminate the cost of an instructorwhile reducing the learning curve of trainees who must use new techniques. Trainees don't have to memorize critical information; they learn how to use the job aid effectively. This reduces training time.

Since job aids can be used to reinforce formal training, they can reduce both instructor and trainee time in the formal training situation. Both of these situations mean definite cost benefits in terms of reduced instructor hours and off-the-job time for employees.

In addition, because job aids also act as a checklist for critical procedures, they can enforce accountability and reduce on-the job errors and the associated costs.

Creating a Job Aid

Okay, now we know what job aids are and where and why to use them. I'm sold. But how do you make them? How can you tell if they are any good?

a) Plan the content.

"Job aids are designed after careful definition of the [performance] objectives, taking into consideration production facilities and cost."(1) Ask yourself, "What do I want my users to be able to do while using this job aid?" This determines content.

In terms of utility, ask yourself "Can the job aid become part of the worker's daily environment? Will the worker be likely to use the job aid when confronted with the associated task? Is the task so critical that there is a significant risk involved if the worker does not use some type of job aid?" (2)

Having satisfied yourself with the answers to these questions, get on with the writing. The key elements of writing good job aids in terms of content are 'observe, talk and do'.

b) Watch people perform the procedure.

And I do mean people (not a person or two) - as many as possible because they all will do it a little differently. Note the order, the speed, the effectiveness and the difficulties of each person. Think about the reasons for these variations. Are they significant enough to be covered in the job aid?

c) Talk to the people afterwards.

"Afterwards" is important; otherwise, your "actors" may feel self-conscious which will affect their performance. Make sure that you talk to a cross-section of people, from beginner to expert. The most reliable source is a good practitioner - the one who has been at the job for a year or two but who doesn't know the job so well that basic and prerequisite knowledge and skills are assumed.

d) Do the task yourself.

There is an old adage which says, 'never ask anyone to do anything that you haven't tried yourself.' You have to understand the task from the doer's point of view. Think about the problems you have in doing the task and write to address these. There are exceptions, of course, e.g. writing the landing checklist for a 747.

e) Test the job aids.

This ensures that they are accurate and useful. Also, "it is important to keep job aids up-to-date as jobs and methods change."(3)

Shortcomings

Despite all of these positive aspects of job aids, be aware that they are not a panacea to training and performance concerns.

Such things as color, die-cut tabs, plasticized cards, heavier stock paper, easel-type binders, etc. make or break some job aids. These customized features can cost a lot to produce, no matter the quantity. This problem accelerates when procedures change often. However, for the right applications, job aids very quickly pay back these costs in terms of reduced instructor and trainee time, as well as reduced error costs.

Job aids are only useful in skills areas where speed is not the essential element of maximum performance. They are not useful in areas where knowledge or attitude is critical to performance. A job aid would retard split-second decisions required in critical knowledge areas, like emergency landings.

Job aids are also not useful for complicated procedures with lots of options. Neither should they be used instead of training where long-term learning is the desired result.

Conclusion

You can lead readers to content but you can't make them drink. As writers of technical manuals, we usually write so that people can do. Yet most manuals are unopened. Of those that are, most of their content is left unread. If most readers do not read all that "valuable explanation," why not give them the information they want in an accessible, compact form? If you want to be their hero, create a job aid. Most people like job aids and perform effectively when using them for the right applications.

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